

REMARKS

Claims 1-4, 6-10, 12-14, 16-19, 21-23, and 25-30 are pending. Claims 1-4, 6-10, 12-14, 16-19, 21-23, 25 and 26 have been allowed. Claims 27 and 29 have been amended herein. Support for the amendment is found at page 18, lines 20-22 of the specification.

Applicant's Response to the Claim Rejection under 35. U.S.C §103:

Claims 27 and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Talwar et al.* (U.S. Patent No. 6,380,044) in view of *Guegan* (U.S. Patent No. 5,705,410). Claims 29 and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Talwar et al.* (U.S. Patent No. 6,380,044) in view of *Guegan* (U.S. Patent No. 5,705,410) further in view of *Chou et al.* (U.S. Patent No. 5,308,780).

Applicants have amended herein claims 27 and 29 to more distinctly claim the subject matter regarded as the invention. Specifically, applicants have replaced --a capacitance on said source side-- with “a capacitance between said gate and said source.” Applicants respectfully submit that this amendment further distinguishes the present invention from the cited references. A “capacitance” as disclosed in *Guegan* means a pn junction capacitance between the source and drain and the substrate, but is not an index showing the amount of overlap between the source and the drain and gate as in the present invention.

Further, applicants respectfully submit that there is an insufficient teaching or motivation in the prior art to combine the necessary elements to result in the present invention. The office action states that one skilled in the art would be motivated “in order to have a semiconductor structure with increased performance.” Applicants respectfully submit that the teachings of *Talwar et al.* and *Guegan* are conflicting and would not lead one skilled in the art to make a combination which results in the present invention.

First, the embodiment of *Guegan* which has the required capacitance is described in figures 4-6. The embodiment of figures 4-6 requires a highly doped channel region 144, a lightly doped deep region 140 and 142 and then heavier doped source/drain regions 154 and 155. See Col. 6, lines 22-25. The extended source drain regions of *Guegan* are utilized in response to the heavily doped channel region.

Contrary, *Talwar et al.* requires a weak dopant in the channel region, substrate, 10. See Col. 6, lines 57-58. The upper source/drain regions 60 and 62 (comparable to 154 and 155 at *Guegan*) are lighter doped than the deep source/drain regions 80 and 84 (comparable to regions 140 and 142 at *Guegan*). *Talwar et al.* then heats the device to initiate explosive recrystallization to activate the dopant. See Col., 11, line 38 to Col. 12, line 56, and Figure 3B.

The inventions of *Talwar et al* and *Guegan* completely differ in their approach to formation of the transistor. The dopant concentrations are near complete opposite. There is no embodiment of *Guegan* which teaches a capacitance value without its taught concentrations. Hence, there is no provided motivation which would lead one skilled in the art to only take the extended source/drain from *Guegan* and utilize them in conjunction with the device of *Talwar et al.* The device of *Talwar et al.* has no benefit from such a modification.

Applicants therefore, in addition to the amendments, traverse the rejection on the basis that there is insufficient motivation to combine the elements of the references. In short, one skilled in the art would not have a reasonable expectation of success in combining the source/drain extension of *Guegan* with the *Talwar et al.* device.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

Amendment under 37 C.F.R. §1.111

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If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

A handwritten signature in black ink, reading "Michael J. Caridi", is written over a horizontal line.

Michael J. Caridi

Attorney for Applicants

Registration No. 56,171

Telephone: (202) 822-1100

Facsimile: (202) 822-1111

MJC/cas